Hobbies WEEKLY

CONTENTS

March 30th, 1949 Price Threepence Vol. 107 No. 2787

Try your hand at making these handsome

GARDEN ORNAMENTS

THESE attractive additions to the garden are by no means difficult to make. Such things as vases, bird baths and tables, sundial pillars, and a host of other things can be quite easily cast in concrete at considerably less cost that the professionally made article. Instructions are given here for a garden vase and a bird bath, as samples of what can be achieved with a little expense and trouble.

Turntable Part

The vase first. For this, make up a kind of turn-table, as shown in Fig. 1. It is a simple affair, just a firm table of wood of a size convenient to hold the finished vase, and fitted to rotate on a baseboard. The table ought to be circular in shape, but it can be octagonal.

Deal board 1in. thick will serve, and it should, for the vase in question, be not less than 16ins. to 17ins. diameter. Probably two boards will have to be placed together, edge to edge, to make up this width, held together underneath with battens.

The Baseboard

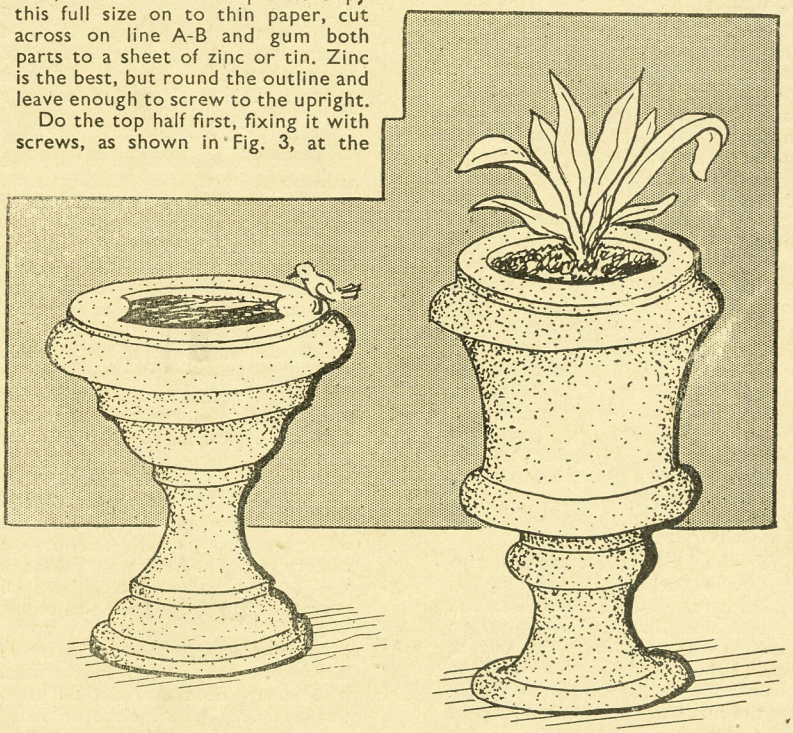
The baseboard can be just a piece of stout board. Fit the table to rotate by means of a stout round-headed brass screw in its centre. As near as possible to the table fix a wood upright as long as necessary, by means of a wood or metal bracket, to which a metal template can be screwed for the subsequent shaping of the vase.

As this template must be directly in line with the centre of the base board, be careful to fix the wooden upright in the position to allow of this, that is, one side of the centre line.

Vase Pattern

Fig. 2 shows the half-pattern of the vase, drawn over 1in. squares. Copy this full size on to thin paper, cut across on line A-B and gum both parts to a sheet of zinc or tin. Zinc is the best, but round the outline and leave enough to screw to the upright.

Do the top half first, fixing it with screws, as shown in Fig. 3, at the correct distance from the centre of the table, to ensure a finished vase of the distance across shown by the half view—in this case, 15ins. When fixing the template, always place with the broadest part at the bottom—moulding is easier thus.



On the table, build up over the centre a core, either of clay or wet sand. The size and shape of the cores in both articles will be seen, as they are shown by thick dotted outlines in Figs. 2 and 4.

Over the Core

See the core is firm and central (a pencilled circle on the table will help here), and then build up over it a concrete mix A, of 1 part cement, 3 parts sand, and enough water to make a stiff wet mass—not a sloppy one. With the help of a trowel, aided by the fingers, work the concrete roughly to the shape of a vase, but about $\frac{1}{2}$in. less all round in size, to allow for the finishing coat.

Rotate the table as the concrete is applied, so that the correct amount and shape can be estimated by comparing it to the template, as in Fig. 3. When satisfactory, roughen the surface by drawing the tip of the trowel across with diagonal strokes, and in the centre of the top, actually the bottom of the half vase of course, push in a 2in. piece of iron rod to half its depth. A piece of iron bolt will do for this. Leave the whole to set for a day or two, when the final finishing coat can be applied.

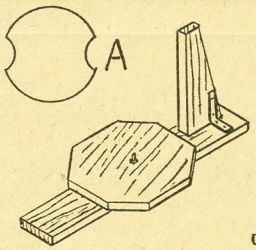


Fig. 1—The turntable

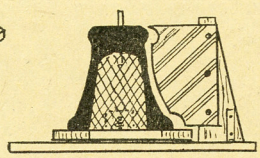


Fig. 3—Shaping the cement

Finishing Coat

This is mix B, and is made of cement, 1 part; sand, 2 parts. Damp the surface of the vase and then apply the concrete, pressing it well in contact with the roughened surface. As the concrete is applied, rotate the table slowly to bring the wet concrete in contact with the template, which will scrape it to the required shape.

See the top is made quite flat and all satisfactory, and leave until set hard enough to safely move. Then lift it from the table, scrape out the core, cover the cast with damp sacking, and leave for at least a week to season.

The lower half of the vase is made similarly, but in the top, instead of a metal rod, push in a piece of $\frac{3}{8}$in. round wood dowel rod, well greased. This is drawn out when the parts are set, then the hole is filled with cement, the top half pushed on, and the lot left until the joint is hard. This completes the vase.

The Bird Bath

For the bird bath, a pattern, also in two halves, is given in Fig. 4, drawn over 1in. squares. Cut the pattern along line C-D and paste or gum to the zinc, and cut out as described above. The top part of the cast is hollowed, as it holds the water for the birds to bath in, or drink, as preferred.

For this, a core is to be built up on the table, but this is not circular, at least not a complete circle, but rather of the shape shown at A, Fig. 1. This allows for an enlarged rim space for holding crumbs for the birds so that they bath, drink, and eat also.

Beyond this, the remainder of the work is practically identical with the vase. When the whole is finished and seasoned, join together with the iron dowel and cement. Fill the bath with water and let it stand for a day or two, frequently changing the water, before allowing the birds free access to it.

A base on which they can stand can well be cast in concrete, or one can be built up with a few old bricks just as well. A point that can be added is to save sand, or clay, when building up the cores for the vase, by placing a can or small flowerpot, on the table, to help fill up space and building the clay over it.

Sometimes the finished appearance of the concrete can be improved by painting over with a cement wash, that is portland cement, mixed to creamy consistency with water.

This should be applied evenly and with a whitewash brush. Be careful in the application or the cement will splash all over the place and make an unsightly mess wherever it sticks.

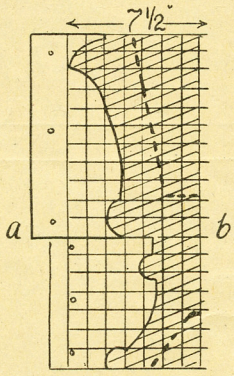


Fig. 2—Half pattern of vase

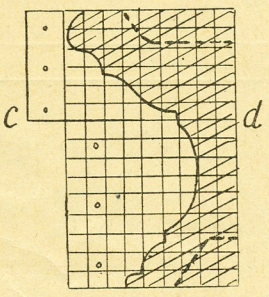


Fig. 4—Shape of the bird bath

Another Reader's Suggestion for DOLL'S HOUSE LIGHTING

WE have had notes from time to time on the construction of Doll's Houses, and various additions which can be put in to make them more complete and attractive. Here is another idea, submitted by a reader, A. N. Mayne of Worcester Park, Surrey.

Some of your readers, he says, may find the idea helpful if they are anxious as I was when making mine, to hide everything in the way of wiring and the power supply.

The actual leads to the lamp holders (six in parallel) I hid in the floors by cutting grooves in the wood and covering with paper parquet flooring. These I then took up the hollow chimney breasts to the roof, where I soldered on the leads for the switch. I drilled two holes in the roof, passed the leads through and then made good the roof.

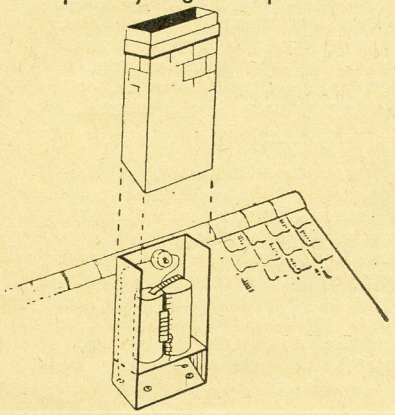
Cycle Lamp Battery

The inside measurements of the brackets shown is equivalent to the width of an 800 twin-cell bicycle battery plus $\frac{1}{8}$in. for any variations in size of the latter—the height, of course, depends upon the size of the house.

As you are aware the usual practice is to place the battery in the roof whe rea trap door is needed but after this has been opened once or twice the edges tend to become ragged. Adoption of the enclosed idea will prevent this and provide a perfect "screen". Battery changing is a matter of seconds by just removing the "shell" of card covered with brickpaper.

The Switch

The hidden switch, it is understood, can be operated without removing the shell. This shell must accordingly be made strong enough to take the pressure when the switch is used. One of the small bakelite doll's house type should be used, to take up as little room as possible. It can probably be glued in position.



Patterns are printed on page 319 for making this

NOVEL ELECTRIC LAMP

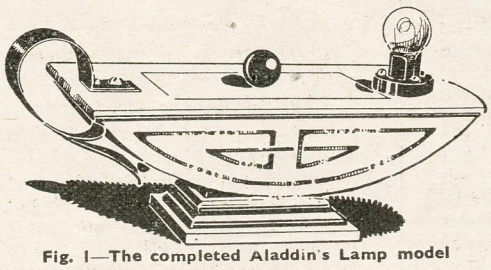


Fig. 1—The completed Aladdin's Lamp model

WE fully believe that those home-workers who delight in making electric novelties will certainly find delight in the one we illustrate and describe here. It is fashioned quite differently from the general run of lamps, as it is designed upon the lines of Aladdin's wonderful lamp.

The shapeliness of the article is seen in Fig. 1, and it shows the bowl-like form of the reservoir which in this case contains a twin 800 dry-cell battery.

At the head of the lamp, there is a holder with midget bulb inserted. At the other end there is a specially shaped handle which is secured to the top surface of the lamp by two screws.

Now this is where the novelty of the article comes in. When the lamp is picked up by the handle, the light immediately appears. When it is placed down again, the light automatically goes out.

These actions are brought about in quite a simple way because the lower end of the handle comes into contact with a 'live' screw directly the lamp is raised and its own weight brought to bear on the spring-like handle. When the lamp is again replaced, the handle assumes its former shape and is thus carried clear of the screw which automatically breaks contact.

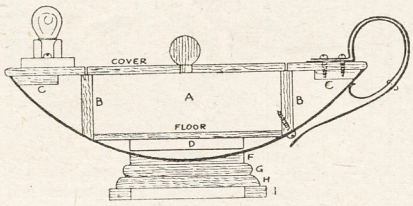


Fig. 2—Sectional drawing of parts

Materials Needed

Very little wood is needed in making up this novelty, just a few pieces of $\frac{1}{4}$in. stuff for the base of the lamp, some pieces of $\frac{3}{16}$in. for the top and floor inside, and a strip of thin bendable plywood to form the body. Full-size patterns are on page 319 in this issue, from which all the parts can be traced and cut ready for assembly.

The sectional view of the lamp, given as Fig. 2, is most useful as showing all the parts and giving a general idea of the make and shape. The assembly of the parts is clearly shown in Fig. 3, and here is seen how each side A is made up of two thicknesses of $\frac{3}{16}$in. wood.

A full-size outline of the sides is given in the pattern, and it will be noticed that one piece has a curve $\frac{1}{16}$in. or so wider than the other. So when each pair is glued together, a rebate, as it were, is formed for the bendable plywood to rest in and be glued firmly.

Also on each inside member sinkings are cut to allow parts C to be glued in (see Fig. 3), and the pattern sheet at C.

Cross Partitions

Connecting the sides A are the two cross partitions B, each measuring 2$\frac{5}{8}$ins. long by 2$\frac{7}{16}$in. wide and $\frac{1}{4}$in. thick. The positions of these are shown on the patterns of the sides. The two cross rails C are 3ins. long by 1in. wide and $\frac{3}{16}$in. thick. One of these pieces is shaped as the half pattern shows to facilitate the wiring later on. This shaped rail is only at one end. The rail at the handle end is a plain square rail, as in the pattern sheet where marked 'handle'. The outer edges of rails C are rubbed down with file and glasspaper to the shape of the curve to suit the thin plywood.

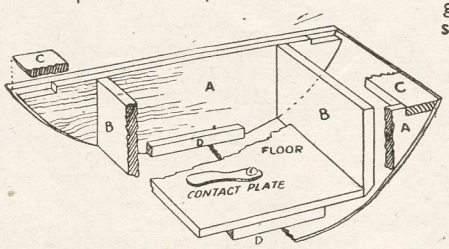


Fig. 3—Interior construction of casing

Next glue in the two fillets D, 2$\frac{1}{2}$ins. long by $\frac{1}{4}$in. square in section. They are intended for supporting the floor, which is 4$\frac{1}{8}$ins. long by 2$\frac{5}{8}$ins. wide and $\frac{1}{8}$in. thick. Glue the floor firmly to the fillets D.

The main top of the lamp is next cut and glued or screwed on. A full-size of this is given on the pattern sheet. An oblong panel is cut from the piece to the double line indicated. This panel is made removable for the insertion of a new battery when required and it rests on the inner sides and ends B, as can be seen on the pattern sheet. A knob glued in the centre of the panel makes for added decoration, and is useful for lifting the panel from its recess.

The Curved Casing

The bendable plywood can now be glued on, and a piece measuring 9$\frac{1}{4}$ins. by 3ins. will be wanted. It should be cut correctly to width, to fit between the outer sides of the lamp and when laid round it may be trimmed to fit neatly against the underside of the top.

The base of the lamp consists of the four pieces of $\frac{1}{4}$in. stuff F, G. H and I, and Fig. 4 shows how they are shaped and assembled. Three pieces only are required as the upper member F is cut from the piece I. The measurements of the pieces are as follows. Piece F, 2$\frac{1}{2}$ins. by 1$\frac{7}{8}$ins; piece G, 2$\frac{7}{8}$ins. by 2$\frac{5}{16}$ins.; piece H, 3$\frac{1}{4}$ins. by 2$\frac{5}{8}$ins; and piece I, 3$\frac{1}{2}$ins. by 3ins. Shape all the edges of pieces G and H and then glue them together.

To get the correct curve in the piece F for the bowl of the lamp to fit in, it will be found best first to rasp away a good deal of the unwanted wood. Then to lay a piece of coarse glasspaper on the curved wood of the lamp, and on this rub down the piece to exactly fit the plywood. Fig. 2 shows how the base will appear when glued to the lamp. On the pattern sheet, it should be mentioned, is a full-size section of the numbers of the base, useful for working the moulded parts.

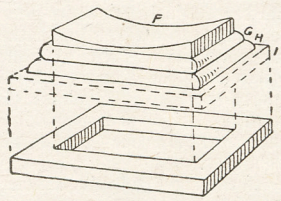


Fig. 4—Parts of the base

The handle of the lamp consists of two strips of brass or copper bent to the curves shown full-size on the page of patterns. The flat portion of the strips is drilled in two places for the round-head screws which hold it to the top of the lamp. A sturdy brass screw is run up through the wood

(Continued foot of page 316)

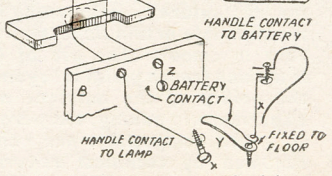


Fig. 5—The battery and wiring

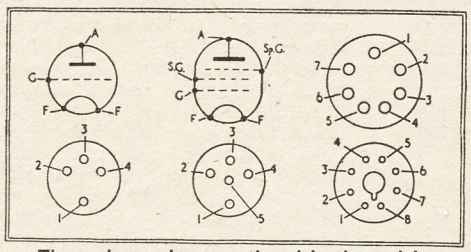
A radio constructor can compromise by

USING DIFFERENT VALVES

THE radio constructor who likes to experiment with various circuits should realise many of the apparently different battery valves are the same, though they may have dissimilar bases and type numbers. So a new set can often be made up, or a faulty set repaired, even when at first sight no suitable valves seem to be to hand.

The Triode

This is the most popular valve. It has Anode, Grid, and two Filament connections, and is shown above the



The various valves mentioned in the articles

diagram of its usual four-pin base. Valveholder connections are as follows: 1—Anode. 2—Filament. 3—Grid. 4—Filament. But some manufacturers are now using the Octal base, which has eight pins and a key-way (see diagram). With this base, connections are as follows: 1—Filament. 3—Anode. 5—Grid. 6—metal coating. 8—Filament. (Extra unrequired pins are blank.) All connections are for underside of valveholder.

With the required valveholder, any of the following valves will function equally well as detectors: Mazda and Osram HL2 and HL2/K; Ever-Ready K30C; Mullard PM1HL and PM2HL; Cossor 210HF, and Mazda HL23.

Pentodes and Screen-Grids

As shown, these have two extra grids—the Screen Grid in the case of the S.G. valve, and Screen Grid and Suppressor Grid with the pentode valve. Normally, any S.G. valve can replace any pentode of similar type, and vice versa.

Most output pentodes have the 5-pin base shown below. Connections are the same as for the triodes, except that the screen grid is connected to pin 5. (Where a suppressor grid is used, it is joined internally to one filament pin.)

High frequency pentodes and S.G. valves use the 4-pin base. Here, connections are as for the triode, except that pin 1 is the Screen Grid. The Anode is taken out to a top cap.

With 7-pin Base

But such valves are also made with the 7-pin base shown to the right. If such a valve is to hand, its connections are as follows: 1—metallising. 2—Grid. 3—Suppressor Grid. 4—Filament. 5—Filament. 6—blank. 7—Screen Grid. Anode—top cap.

Some are produced with the octal base. Connections should then be as follows: 1—Filament. 2—blank. 3—Anode. 4—Screen Grid. 5—Suppressor Grid. 6—metallising. 7—blank. 8—Filament. Grid—top cap.

Therefore 4-pin, 7-pin, or octal type can be used with equal satisfaction, provided, of course, the valveholder is of the kind required by the valve, and wired up as mentioned.

Interchangeable H.F. pentodes and S.G. valves are: Mazda VP215 and VP210; Ever-Ready K50M; Osram W21 and VP21, and Cossor 210VPT. Any of these can be used in the same circuit.

Interchangeable output pentodes are: Mazda PEN220; Ever-Ready K70B; Mullard PM22A; Osram PT2; Cossor 220HPT and 220PT. The tetrode Osram KT2 can also be used.

Loss of Volume

Where a tetrode or pentode output valve is specified, a triode output valve can always be used, if some slight loss of volume can be tolerated. Detector types have been mentioned, and types suitable for output use are: Mazda P220A; Mullard PM202 and PM2; Osram P2, and Cossor 220P.

When changing output valves in this way, always adjust the grid bias battery plugs to the value which gives best reproduction, as some of the different valves require slightly different bias voltage for best results. When changing over H.F. and detector valves, normally no such modification of voltage is necessary.

SHELLAC

THE basis of all french polish is shellac which is derived from the exudation of the lac insect, mainly found in some districts of India. It should be kept under water in order to prevent loss of "nature". Generally it is obtainable in thin flakes which vary in colour. The use of it in making french polish is beyond the ability of the amateur as experience in mixing, temperature and composition are only acquired by technical experienced people.

A Practical Clothes Prop

A WASHING day that is windy is always troublesome to the housewife, and a clothes prop that will stay put would be welcomed with gratitude.

The props illustrated and described have proved their worth over and over again, and they are remarkably simple to make. Both are made to fit on the usual type of clothes prop, which is generally made of 2in. by 1in. wood.

Spring Steel

For Fig. 1, two pieces of steel spring about 4ins. long and ¾in. wide are wanted. An old gramophone or clock spring is just the thing and you can get one from a music or clock shop for a few pence. Or you might even have one given you for the asking.

Take out the temper from each end by heating in a gas flame or in the fire and drill or punch the holes—two in each end as shown. Screw one end of each to a short length of 1in. diameter

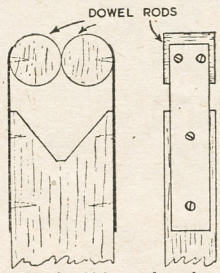


Fig. 1—Side and end view

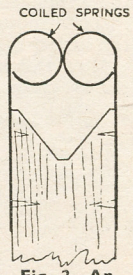


Fig. 2—An alternative

dowel rod or piece of broom handle about 1in. long, while the other end is securely screwed to the top of the prop.

All-Steel Alternative

Fig. 2, is a modification of the one just described but instead of using dowel rods the springs are cut a little longer, say about 6ins., and bent round to form a loop.

You will find it quite easy to bend the springs if you use round-nose pliers and bend while the steel is still hot—not forgetting to hold the other end with pliers or in a vice.

The tension of the springs can be adjusted by bending at a point where the wood at the top of the V finishes. It is only necessary to have just sufficient spring so the prop does not fall off the line by its own weight—a slight pull being all that is required to release it.

A coat of stove black or other enamel applied to the steel parts will help to protect them from the weather.

The keen poultry keeper will find it useful to make

A TRAP NEST BOX

THOSE readers who keep fowls may at times be troubled with some of their birds eating their eggs. This is an aggravating habit difficult to cure, generally ending with the untimely demise of the bird. What is wanted in such a case is a trap nest box.

This is fitted with an interior trap which, when the hen rises from the nest, after laying an egg, allows the egg to roll out of harm's way. A sketch, showing a side section and a front elevation of a good design of nest box, with egg trap, is shown in Fig. 1.

General Box Frame

Interior dimensions are given, so the box can be built with any suitable wood available. Make up the sides, back and front piece, and securely nail all together. Then cut the sloping floor, which it will be seen, extends from the front piece of the box, about half way up, to about two-thirds of the depth of the box. The edges at front and back of this part should be bevelled to make a neat fit. Fix it in and secure with nails through the sides of the box.

The trap bottom is cut the given width, i.e. 7ins., and is hinged to the back. It is bevelled at both front and back edges before hinging, and should, to prevent any possibility of it sticking, be about $\frac{1}{8}$in. short each end of the box sides.

Fitting the Hinge

A good pattern of hinge to use is that known as a backflap, $1\frac{1}{2}$ins.size, and when buying, choose a pair with rather a loose motion. The correct height to hinge the trap is when the trap is horizontal, as in the diagram, the space beneath it will allow a full size egg to pass easily.

The trap is, normally, horizontal as shown, and to keep it so a spring is fitted each side. These springs are easily made by winding some rather fine steel wire round a stout knitting needle. Screw eyes are driven in the trap each side, to which the springs can be hooked. Screw hooks or eyes are fitted to the sides at just the right height to hold the trap up in the horizontal position.

Spring Shield

While not absolutely necessary, it is a good idea to shield these springs with a casing, bent up from tin, as at Fig. 2. Any piece of tin, obtained from an empty food container, will serve. After bending to the shape and, of course, allowing ample room for the spring to function, it can be nailed in place.

All that is needed to complete is to nail a bottom and roof to the box. If the box is of the outdoor kind, the roof could be covered with a piece of linoleum to keep the wet out. Or a small piece of roofing felt would do. Alternatively, feather-edge boarding could be used.

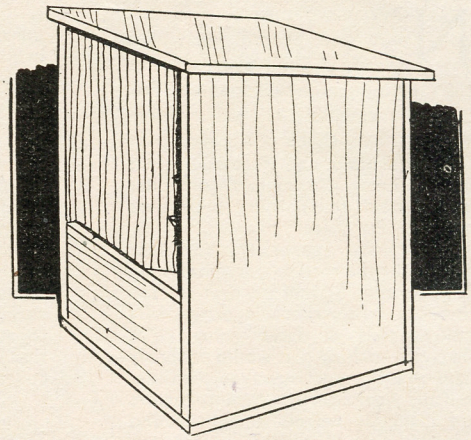
Coat the box with creosote, and before allowing it to be used sprinkle a little chaff under the trap nest to prevent the eggs cracking when they roll underneath.

An Alternative Type

An alternative form of trap is shown in Figs. 3 and 4. This needs no springs to bring the trap up, but makes the use of a lead weight for that purpose. If chosen in place of the spring one, there must be room at the back of it for the lead weight to move in, or the trap will not function.

The trap in this design is not hinged to the box, but instead moves on pivots each end, the pivots working in holes bored in the sides of the box. The back edge of the trap should be nicely rounded, and the pivots provided by driving stout wire nails in, one each side.

For the weight, get a few inches of stout wire and about half a pound of old lead. Make up a mould by boring a $1\frac{1}{2}$in. hole through a piece of wood and covering the hole with a piece nailed one side. The wire is inserted in the mould, with one end (the end inside the mould) bent a little to hold better. The wire should be in about the middle.



Then melt the lead and pour into the mould. When cold, remove, and boring a small hole in the centre of the curved edge of the trap, force the wire of the weight well in.

Bore a hole in a suitable place each side of the box and fit the trap in. See it works quite smoothly. A slot must be cut in the centre of the back of the box, as in Fig. 4. large enough to allow the weight room to rise and fall, and if necessary, small nails can be driven in the sides of the box at the right height to stop the trap rising above the horizontal.

Weight Adjustment

A final point to remember is that the springs, or weight, while strong enough to lift the trap easily enough when the bird is off, must not be too strong so the trap must drop when the weight of the bird rests upon it.

When the bird rises from the trap, the latter should lift and allow the egg laid to roll safely beneath it.

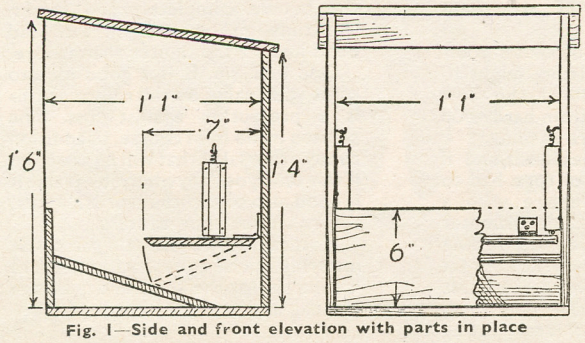


Fig. 1—Side and front elevation with parts in place

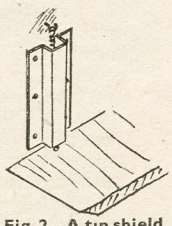


Fig. 2—A tin shield for the spring

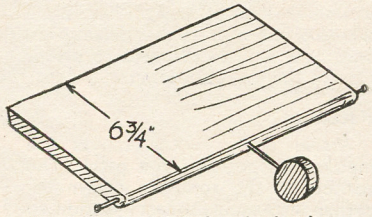


Fig. 3—Weight fitted to back edge

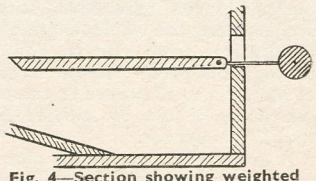


Fig. 4—Section showing weighted platform

The wise camper will now attend to his
TENT OVERHAUL

NOW is the time to give that tent you stored away last autumn a good overhaul—for the camping season will soon be here. Having unearthed it, pitch somewhere where there is a good space to walk around, and start operations by inspecting the 'collars' (or collar if it is a bell tent) where the canvas rests on the poles.

These are generally complete circles of rope held to the material by large stitches. Should any have started to break away, there is danger of a pole sooner or later going right through—a thing that would probably happen at the most inconvenient time.

If any weakness is apparent, repairs are made by travelling right round the defective collar with continuous spiral stitch, going over the cord at each turn, and securing a fresh grip on the canvas every time the needle comes round. This may mean going a little further down than the original stitch position, and the pole has to be temporarily removed for this.

Eyelet Collars

Next look at the eyelets round the eaves (through which the guy-lines go) as these have a knack of breaking through. Repairs can be effected in much the same way as with the crowns, by making small collars of cord, or even thick string, and sewing them under the broken eyelets with the continuous stitch.

Should the tent be of light-weight material, an ordinary large needle with strong carpet thread will do. Heavier canvas, however, will require a small-sized 'packing-needle' and fairly heavy twine. A 'palm' is also useful, this being a little leather and metal pad which is slipped on the hand and assists in pushing the needle through thick materials, etc.

Having made sure the crowns and eyelets are in sound condition, examine the seams for any place where a stitch or so may have given way. Sew a little distance to either side of the doubtful length.

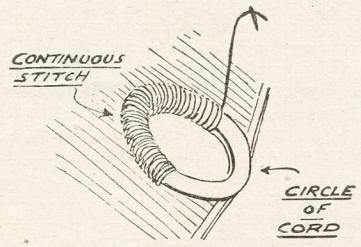
Patching

Actual tears in the canvas are mended by putting on a patch. The corners of the rent are drawn together into their correct position to one another to prevent the material puckering, and then small stitches are run along the whole length of the tear, across from side to side and through the patch. The outer edges of the patch are fastened to the main canvas by a line of stitches close round the border.

A strengthening patch can often be sewn into the corner where the eaves, wall and roof meet. The strain here is considerable, and is a point that unfortunately soon shows weakening in some tents. The patch is sewn into the corner with good strong stitches going through the wall and side, and the outer edges made secure.

For Small Holes

Some canvas is inclined to develop a small hole here and there rather early. Although it does not sound very orthodox, such flaws can be mended by the sticky patches used by cyclists. Placed on the inside, these patches hold the few frayed threads together, and make better repairs that does stitching, which, unless it covers a good area, tends to 'chew'



Mending toy guy eyelets

up the material round what is really perhaps a very little hole, and so makes it eventually worse.

While you have the needle and thread about, examine the sackcloth which runs along the bottom of the walls in many tents. As this comes in contact with the grass it often rots very quickly. Renew completely if necessary. Also take a look at the door tapes, replacing any that are broken and strengthen those that need it with a stitch or two. Examine, too, the wall 'brailing' tapes.

About Pegs

Like many other things it is the small points that matter in looking after a tent. There should be the correct number of pegs always with it, and these should be of suitably-graded sizes. Thus, the two or four pegs for the main guys must be quite long, while the side guy-line pegs can be shorter, and those which hold down the bottom of the walls comparatively small.

Runners also should be kept in good condition, and any missing ought to be replaced now. Model the new pieces for the former from hardwood boring the holes before shaping.

Check over guy-lines also, and if any make-shift pieces of rope had to be used last year, replace with a length of rope of suitable diameter and quality. Should you be dealing with a side guy-line, do not forget the little washer of wood that goes over the knot before the rope is run through the eyelet, as this takes away a great deal of strain from the canvas, distributing the pull more evenly.

Should your inspection (or last year's experience) have shown that the tent has developed the supreme fault of the camping world, viz., 'spraying', which means that the canvas is letting rain spray through, the material should be treated with soapy water, and then alum. Make up the solutions in two buckets, and fairly strong.

Alum Treatment

When all is ready take a large brush and 'paint' the standing tent well with the soapy water. Be liberal with the solution and work it right in. When the tent is partially dry, take the alum, and again go right over the canvas with the solution. The alternating soap and alum may be repeated several times as long as the solutions are, as it were, 'laid on', and there is no suggestion of the one merely rinsing out the other.

Another item of examination should be the bag, as this too should be kept in good condition. Mend any obvious holes in the corners, also repair any eyelets round the top of the bag that may be breaking. The little flap of canvas that goes over the tent before the bag mouth is closed is of importance, and should be renewed if not in good order.

Practise Rolling

After completing your inspection and making all the necessary repairs, it is a sound idea to practise rolling and packing the tent. Simple as this may seem, many a tent has been irreparably ruined by having to force sharp pegs down the side of one that is badly rolled and fits the carrying bag too tightly. Or if the pegs are already inside the canvas, great damage can be done when forcing the roll into a bag. A tent that fits too tightly does not do the bag any good, either.

Should you find that after rolling, the canvas will not go into the bag without an undue amount of pulling and pushing, the best thing is to undo the bundle completely and refold, this time making every crease and bend just a trifle tighter than before.

One final tip. It is a good idea to paint your name on the canvas as this is a precaution against loss. The painted name is, of course, in addition to any other label that will be attached if the tent goes anywhere by train. It is good also to add the words, 'If lost, return', then your address.

Most canvas will take stiff paint. The lettering can be quite small, and there is time yet for the paint to dry before the bag will be used.

The Nelson Column is an outstanding feature of this

MYSTERY MONEY BOX

THIS little money box should make a strong appeal to all our fretworker friends and more especially to the lovers of our national hero, Lord Nelson. It is around the monument of Nelson in Trafalgar Square, London, that we have centred our idea of the mystery money box illustrated in Fig. 1.

Here is shown just an innocent-looking box with an outstanding overlay of the Nelson Column on the front. Then, looking at Fig. 2 we see how this overlay is artfully hinged along its bottom edge to pull downward by a touch of the forefinger.

To get the money out of the box it requires only the tip of a sharp pocket knife to cut the paper which covers a cut-out disc of wood formed in the floor of the box. The hole from which this disc is cut is shown in Fig. 3.

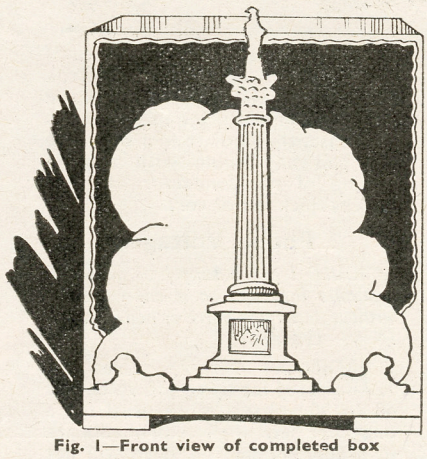


Fig. 1—Front view of completed box

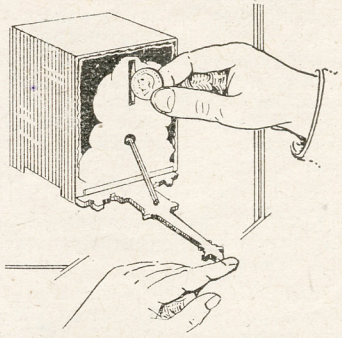


Fig. 2—Revealing the coin slot

Box Construction

The simple construction of the money box is given in Fig. 4, and from this it should be an easy matter to mark out the parts and assemble them. Cut the box parts, noting the size of the top and floor as being 3½ins. by 2½ins.

All wood is ¼in. thick, with the exception of the "column" overlay which might be 3/16in. or even ⅛in. according to the kind and quality of stuff used. The slot and hole in the front of the box is, of course, central and set out to the measurements given in Fig. 4.

The hinged "column" overlay is connected at the back to a piece of elastic, or a rubber elastic band doubled to get just the right tension to hold the overlay close and firm against the front of the box. It will thus be seen that the hook which is run into the back of the box to hold the elastic, must be screwed in before the four sides of the box are glued together.

The top of the box might, with advantage, be screwed to the sides, so that if and when the elastic requires renewing this can readily be done without damaging the box. Simply remove the screws and re-insert them when the repair has been carried out. The hook in the back of the box should be about ⅜in. up from the floor; that is, on a level with the hole in the front of the box.

The whole box can now be glued together and the elastic band passed over the hook and threaded through the hole in the front of the box where it is held by a little piece of wood or a match, until the overlay is ready to be attached.

The pattern for the "column" can be drawn out with the help of the squared diagram at Fig. 5. A piece of wood about 4½ins. by 4ins., and of the chosen thickness, is required, and a number of ½in. squares drawn over it. Follow the squares carefully to get a good outline.

As the latter is symmetrical it would be necessary really only to line in one half of the outline and then trace this and transfer it to the other side of the given centre line. In this way a perfectly balanced outline is assured. Cut round the pattern with a fretsaw and clean up any rough edges left with fine grade glasspaper.

Overlay Fixing

The lower end of the overlay when fixed must come flush with the bottom edge of the box, and the enlarged detail in Fig. 3 shows how the hinging is carried out. A piece of linen tape 3¼ins. long and ½in. wide is creased along its length. Half the width is glued to the overlay and half to the box as shown.

Take care that the two exposed surfaces of the tape do not contact each other until the glue has hardened. Test should, however, be made before allowing the glue to harden to see that the slot in the front of the box is properly covered by the "column".

The sectional diagram, Fig. 3, shows all the necessary detail regarding the elastic (E) and the hole in the floor for the extraction of the money. Four square feet, F, should be added for clearance when the overlay is lowered.

In decorating and finishing the box, an idea can be got from Figs. 1 and 5. An outline of cloud could be drawn on the front and the outer sky painted dark blue, or even black, to throw in relief the "stone" column.

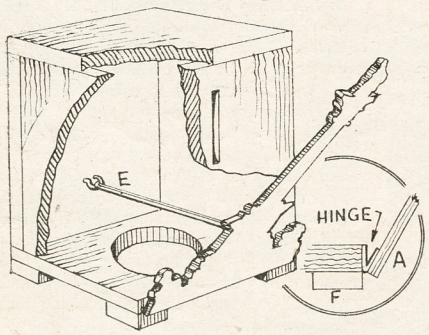


Fig. 3—General view of construction

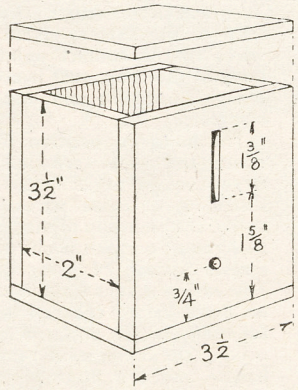


Fig. 4—Marking out of parts

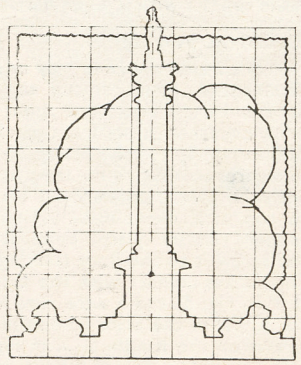


Fig. 5—Outline of column and clouds

Jointing Paste

PLEASE would you forward a recipe for a very quick drying jointing paste for steam or water pipes etc.? (R.K.J.—Southall).

QUICK-drying jointing pastes can consist of white lead and litharge in equal parts, mixed in paste form and then blended with Terebine to a sufficiently soft paste. This will dry in an hour or so, but may be liable to crack.

The use of methylated spirits or any other spirit drier is not advisable for use on steam work.

There are several proprietary brands of jointing pastes on the market, which might suit your purpose.

Cold Storage Box

IS it possible to make a small storage box, say, two feet square, without the use of gas or electricity? (J.B.—Gateshead).

FOOD storage boxes can best be made in the manner of the old ice box—with a strong wood box body, lined with zinc and having the space between the inner zinc body and the wooden box well filled with slag wool or other non-conductor of heat, a vent pipe and plug at the bottom is needed to allow the water to drain out, and a separate compartment made of wire mesh or the like, is necessary to contain the ice.

Other practical "coolers" can be made by building up a box with slabs of semi-porous material such as fire-brick (jointed with Pyruma).

This should stand on a metal tray about an inch deep. Cold water is poured over the bricks and much of it is absorbed. The evaporation of the water as the bricks dry, reduces the internal temperature quite a lot. In each case, the door should be at the top and be double with a good lagging of non-conductor of heat, such as thick felt or cork.

Phone Voltage

COULD I put a supply of 60 or 90 volts for H.T. on a one-valve set without damaging valve or headphones? (A.W.—Lydney).

ORDINARY battery valves are intended for up to 150 volts, and 60 to 90 volts is quite usual for a one-valve set. If all components are in order, phones and valve will not normally suffer; but as a rule there is little advantage in using more than 60 volts under these conditions.

If it happens that you are using one of the new 1.5 volt valves, then these are intended for a maximum of 90 volts on the anode, so do not exceed this.

Canoe Covering

CAN a Rob Roy canoe be covered with canvas instead of wood or not? (H.A.—Edinburgh).

THERE should be no difficulty in covering a Rob Roy canoe with canvas instead of wood. All that is necessary is to nail ribbands of wood 1¼ins. by ⅜in. thick, and spaced about 2ins. or a little more apart, from stem to stern, with a double thickness one at the top or first one. These can be nailed either to the shapes or ribs, whichever are used.

Use a good quality canvas, white duck or tarpaulin, for example, and when fixed over, sprinkle liberally with water to shrink the canvas. Afterwards paint the canvas first with boiled linseed oil, then with good paint, any desired colour.

Model Boat Motor

I AM building a 38in. motor cruiser which will weigh about 5lbs. Now I want to power it with a steam engine for a fair turn of speed. (M.G.M.—Wolverhampton).

A SUITABLE power plant for a model boat 38ins. long would consist of a simple cylinder double acting steam engine with a bore of ⅛in. and stroke of ⅝in. to ¾in. The boiler should be about 1¾in. diameter and 6 to 7ins. long, fired by a vaporizing methylated spirit burner with a separate spirit container.

This should give a half hour's run on one filling, and if driving a propeller of about 1½ins. diameter, 4in. pitch should give a good turn of speed.

"Fire" Balloons

COULD you tell me, please, the details and principles of the "fire balloon" as illustrated in your colour supplement of the 1949 Handbook? (S.G.—Crumlin).

A FIRE balloon is a very simple contrivance; it consists of a very light-weight envelope or balloon, generally pear-shaped, with an opening at the lower end. Tissue paper can be used to make the envelope.

Suspended immediately below this opening is a ring of fine wire or the like, covered by wick or thick absorbent material which can be criss-crossed over the opening within the wire ring.

This is then impregnated with methylated spirit and this when ignited causes the air within the balloon to become heated or rarefied.

Thus the weight of the air within the balloon becomes lower than that of the surrounding air, and the balloon rises and remains up while the source of heat persists.

Electric Lamp—(*Continued from page* 311)

side of the lamp with the rear partition B so its end just projects inside as seen in Fig. 2. The tail end of the handle should just clear the screw to make contact with it when desired.

Electrical Wiring

Work inside the lamp may now be commenced. First remove the top door and make two holes about ⅛in. or so diameter in the front partition B, (see Fig. 5), for the passage of the two wires connecting the lamp holder with the handle contact and battery contact at Z. Next make a brass or copper contact plate, bend it up and screw it to the floor (see Fig. 3). This makes contact with the battery at Y in Fig. 5, and a wire runs from the screw in the plate to one of the screws on the handle at X in Fig. 5.

In wiring up for the lamp bulb, first fix the two wires to the holder which is as yet detached. Then push these wires through holes made in the top of the lamp, through the holes in partition B and down to the screws Z which latter takes the contact strip of the battery. Next connect wires to the contact points in the body of the lamp, that is at X and Y in Fig. 5, until the complete circuit is complete.

The holes in partition B through which the wires are led, can be large enough to facilitate the easy threading of these wires. Alternatively, the main top of the lamp could be screwed on with small round-head screws instead of being glued on. The wiring is thus simplified and can be done before the top is put on. Especially is this useful in regard to making the connection between the handle and the floor plate Y, see Fig. 5.

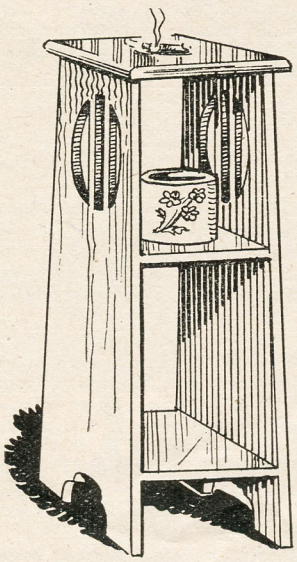
The matter of finish to the wood depends what kind of material is used. If a soft wood, it is advisable to paint the whole article, varying the colour scheme to make for contrast and effectiveness. For instance, the body of the lamp might be white or cream with the simple side decoration carried out in crimson or even darker red. The base and knob could be matt black or polished.

This is the type of novelty, when completed, which always makes an appeal, and you should remember it if deciding to contribute some effort to a local sale-of-work or exhibition. If nicely finished and working efficiently it will also find a ready sale.

In this respect the excellence of the finish has much to do with the matter and some attention should be paid to the colours and the way in which they are applied.

The home carpenter can easily make this practical

SMOKER'S STAND



HERE is just the thing for the amateur home carpenter to make. The stand, as can be seen from the picture of the finished article, is extremely simple in form, yet it does not lack character. Such a stand could be very quickly made and would give pleasure to any smoker.

It could be made entirely from ½in. wood, and if some oak could be obtained, or even mahogany, either variety would be easily finished with stain and polish. Oak again, lends itself to a finish of light stain and a rubbing of linseed oil or wax polish.

Suitable Wood

Mahogany, of course, calls for french polish, and as all surfaces of the stand are plain and easily workable, this finish should be carried out in the orthodox manner with the polishing bob.

Two simple sides are first prepared and cut to the measurements given in Fig. 1. It will be seen from the end view of the side in this illustration that the two shelves are housed into the sides, making for strength and rigidity.

Mark off on the sides the distances of 7⅛ins. and 9⅛ins., allowing a width of ⅛in. between the lines for the thickness of the shelves. The grooves may be cut across ⅛in. deep with the tenon saw, the waste wood being cleaned out with the ½in. chisel.

Decoration

The upper part of the sides could be decorated, and lightened in appearance somewhat by the simple fretted panel shown. A squared diagram of this decoration is given in Fig. 2 from which the worker can make his enlargement. This would be best done on paper using 1in. squares, and when the complete outline is done the latter can be transferred to the wood by means of carbon paper and a hard well-pointed pencil.

Fretted Edges

When cutting the panel use a fairly coarse saw and then clean up the edges well afterwards with coarse and fine glasspaper. It must be mentioned here that if the worker has included these fretted panels in his design, the inside edges of the cut frets must be carefully covered with either varnish or polish in several coats with a small brush.

Two shelves are wanted, the lower one being 9⅛ins. long by 7ins. wide, and the upper one 8ins. long by 7ins. wide. Allowance has been made in these lengths for a ⅛in. housing at each end of the shelves.

Checking Direct

Note, however, that it would be advisable to cut, glue and screw the lowermost shelf in place between the sides before the upper one is handled. Like this, the exact length of the upper shelf can be checked for length direct before it is cut and prepared for gluing into its recesses in the sides. The sawn edges of the shelves require to be slightly bevelled with the plane to suit the slope of the sides which slope of course is repeated in the grooves.

Glue the shelves in place, but being end grain the glue will have no great holding power, therefore, some glued dowel pins or screws must be run through the sides. Hardwood pins make the strongest joint and look quite neat after the projecting ends have been cut and glasspapered level with the general surface of the sides.

Round-head screws could be used here instead of the dowel pins, or countersunk screws with, perhaps, small wood discs glued over them for good finish and effect.

The Top

The top of the stand is a plain piece of wood 9ins. by 7ins. with its corners slightly rounded off and made smooth. The top edges all round, too, might also be glasspapered away and made smooth. It might be a good idea if the worker has one of the usual type circular oxidized or chromium-plated ash trays to be sunk into the top of the stand. A circle of wood could be removed with the aid of the fretsaw for the purpose.

In Fig. 3 we show how the top may be firmly fixed to the sides. Screws through the top into the end grain of the sides would not form a good fixing, so two small fillets of wood should be glued along inside and the top then glued and screwed to this.

Before adding the final coat of stain and polish or varnish go over the whole thing with glasspaper so the wood is free from grease and dirt.

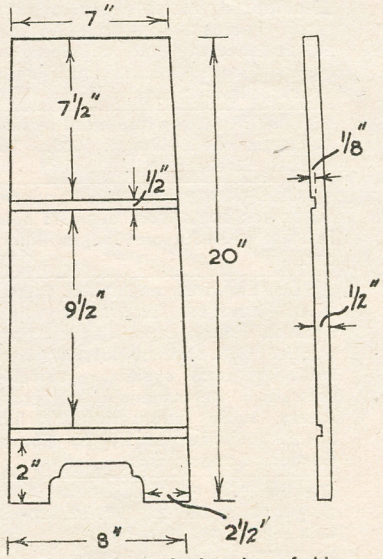


Fig. 1—Plan and edge view of sides

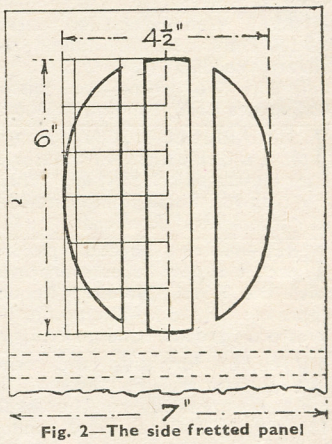


Fig. 2—The side fretted panel

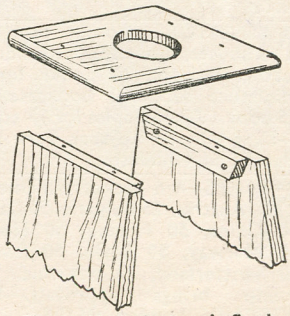


Fig. 3—How the top is fixed

MISCELLANEOUS ADVERTISEMENTS

The advertisements are inserted at the rate of 3d. per word prepaid. Name and address are counted, but initials or groups, such as E.P.S. or £1/11/6 are accepted as one word. Postal Order and Stamps must accompany the order and advertisements will be inserted in the earliest issue. Announcements of fretwork goods or those shown in Hobbies Handbook are not accepted. Orders can be sent either to Hobbies Weekly, Advert. Dept., Dereham, Norfolk, or Temple House, Temple Avenue, London, E.C.4

PRODUCTS required from home-workers making up fancy leather goods. Write—Dept. 11, Empire Co., 117 Nottingham Road, Loughborough

HAPPY CIRCLE Pen Pals Bulletin, 1/3. Contacts everywhere.—176a, Shoreham Road, Hove.

POST FREE—fascinating steel tracing machine for copying and enlarging magazine drawings, maps, etc. Price 5/-.—Clayton, 16 Westminster Road, Bradford.

FREE—2 Golden Jubilee, George VI; approvals from ½d., discount.—Bishop, 40 Marine Pde., Hythe, Kent.

PERSONS required to make ladies fancy goods at home in spare time.—Dept. 3, Somat Plastic Co., Ltd., 8 Middle Marsh, Nottingham.

STAMPS FREE ! ! Twenty unused (2½d.).—G. H. Barnett, Limington, Somerset.

MATCHBOX Radio Set. With the aid of our instructions you can build a complete radio set in a matchbox, using parts easily obtainable from your radio dealer. Incorporates the crystal-valve Radar Detector and requires no batteries. Tunes B.B.C. wavelengths. Full instructions, drawings, and theoretical wiring diagram, 2/9 post free.—John O'Beirne (H), 137 Cotham Brow, Bristol 6.

SILVER Wedding Packet contains 100 Empire stamps including ten Silver Wedding (No G.B.). All different, 2/6 post free.—Bisson, 46 Sumatra Road, London, N.W.6.

J. McGARRIGLE & SONS for aeroplane and ship kits. All accessories. New illustrated price list 6d. Wholesale lists 9d. Retail stamps list 4d.—43 Purbeck Road, Romford.

FREE—North Borneo pictorial packet of new issues overprinted with the Royal Cypher. Request approvals (2½d.).—Thompson, 2 Western Gardens, London, W.5.

WHEELS for toys, and other accessories. Full lists will be sent on application to The Joyden Toy Co., 193 Chase Side, London, N.14.

MINIATURE books for doll's houses, models, etc., handmade, leather bound, 20 books for 5/-. Miniature sectional bookcase with 15 books, 7/6. Samples for 1/- stamps.—D. & O., 58 Royston Park Road, Hatch End, Middlesex.

STAMPS—1/6 packets (all different) 50 Austria, 25 Bulgaria, 50 Canada, 50 China, 50 Finland, 50 Holland, 50 Norway, 50 Spain, 50 Sweden, 50 Switzerland, 25 Bohemia. 2½d. stamp brings approvals.—BCM/POSTAIDS, London, W.C.1.

BE Taller in 14 days or money back. Details 1d.—Stebbing System, 28 (HB) Dean Road, London, N.W.2.

MAKE a ship in a bottle. A simple and profitable hobby. Models that last. Full plans and detailed instructions 2/6. Satisfaction assured.—Phillips, Littlecraft, Kingswear, Devon.

SPARE time cash. Interesting clerical work. Confidential details 1/- postal order and S.A.E.—W. H. Willoughby (HW), 13 Lily Hill, St. Whitefield, Manchester.

ATTRACTIVE Triangular stamp, Australian and others free. Request discount approvals.—Owen (H), 237 Hartford Road, Davenham, Northwich.

BE Taller. Quickly ! Safely ! Privately ! No appliances—no tablets—no dieting. Details 6d. stamp.—Malcolm Ross, Height Specialist, BCM/HYTE, London, W.C.1.

MODELS. You can make lasting stone-hard models with Sankey's Pyruma Plastic Cement. Supplied in tins by Ironmongers, Hardwaremen and Builders' Merchants. Ask for instruction leaflet.

TRANSFERS for decorating toys, trays, furniture, fancy goods. List and samples free. Flowers, pixies, dogs, nursery rhymes.—H. Axon Harrison, Jersey.

M.O. MAGAZINES show how to make money in your spare time. Special introductory offer. Send 1/3 for six different magazines.—Hazlehurst's, 25 Melrose Avenue, Hoylake, Cheshire.

PERSPEX Sheets, flat, clear or coloured, cut to shape. Corrugated Perspex. Aluminium and plastic sheeting and mouldings.—Henry Moat & Son, Ltd., Atom Works, Newcastle.

PLASTER casting improved by new Plastic Gel.—Dohm, Ltd., 167 Victoria Street, S.W.1.

BUILD your yachts, cabin-cruisers, power boats from our kits now. Full list 1/-.—Sutton Models, Billericay.

COPPER wires, enamelled, cotton, silk covered. Litz, most gauges. Ebonite, Tufnol, Paxolin tubes, rods, panels. B.A. screws, nuts, washers, soldering tags, eyelets. Wireless crystals, permanent detectors. Latest radio publications. List S.A.E. Write P.R.S., 33 Bourne Gardens, London, E.4.

PERSONS required make fancy goods at home. Write for details.—Melton Manufacturing Co., Southgate Street, Leicester.

ELECTRIC Train Kits. Exact "OO" scale. Finest line ever produced. Illustrated catalogue, 6d.—Sutton Models, Billericay.

DOLL'S House fittings and papers, send S.A.E. for list. Doll's house plan special, send 2/6. Trade supplied.—Zimplan, 88 Ware Road, Hoddesdon.

RUBBER tyred Metal Disc Wheels finished in red, green or blue enamel. 2ins.—2/6, 3ins.—3/- per set of four. Post paid. Other sizes available up to 9ins.—The Joyden Toy Co., 193 Chase Side, London, N.14.

OUTSTANDING "Popular Mechanics" Books: 3/- each or five for 12/- post paid. All constructional. "Novelties on Lathe", "Action Toys", "Working with Plastics", "Lawn and Garden Novelties", "Jigsawed Novelties", "Ten Power Tools Designs". "What to Make, 1949" 10/-. "Popular Mechanics" Magazine, now 22/6. Twelve issues post paid. Five big illustrated lists American Books, plans, magazines, 6d. stamps.—BCM/PUBLICATIONS (H2), London, W.C.1.

A collection of British Colonial stamps, mint and used, free to all requesting discount approvals (Without approvals 1/6). Postage 3d.—H. A. Smith (PTS), 13 New Road, Scole, Diss, Norfolk.

BLUSHING, shyness, nerves, self-consciousness, fears, ended. Details under plain cover 1d.—Stebbing Treatment, 28 (HB) Dean Road, London, N.W.2.

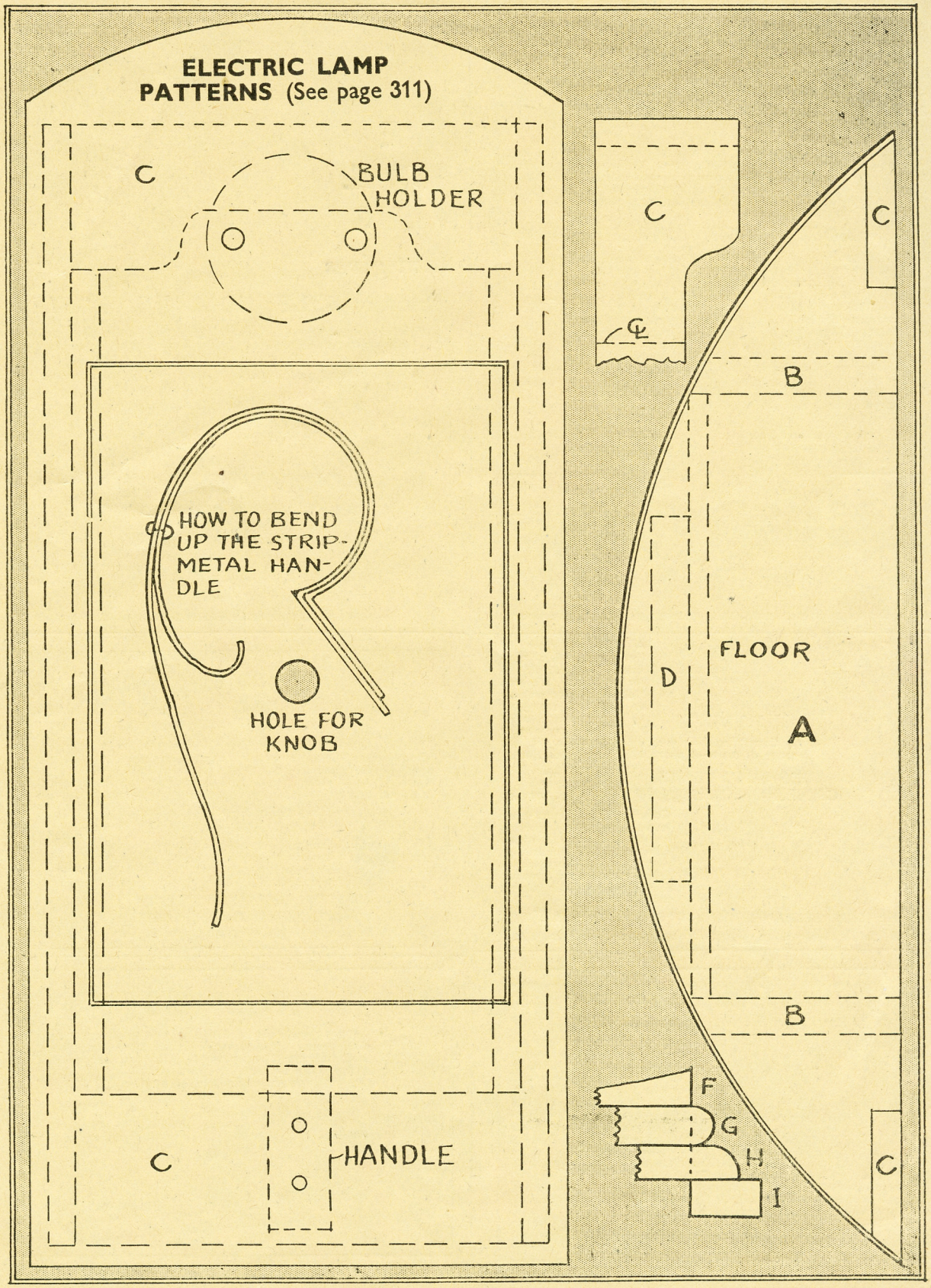
£50 for one job. Architectural modelling pays. We supply plans, instructions and sell your work. Details free.—B.9. Biltex, 6 Silver Crescent, London, W.4.

£5 to £20 weekly earned at home, running your own Mail Order business. Details 1d.—Stebbing Publications, Ltd. (HB), Naphill, High Wycombe.

HOW to make unbreakable hollow dolls. Formula and hints on manufacture, £1. Doll moulds supplied. Toy casting moulds, deep cut. Soldiers, sailors, airmen, tanks, planes, farm and wild animals. Catalogue 9d. Also moulds for plastercraft, brooches, ornaments, wall plaques. Catalogue 9d.—F. W. Nuthall, 69 St. Marks Road, Hanwell, London, W.7.

LEATHER Perspex, Wood, Lampshades, can now be easily embossed with names and decorations in gold, silver, colours, with "Monogold". Complete outfit including tools, materials, instructions—7/6. Details free. Agents wanted.—Dawson, Dept. M.1, 130 Park Street, Oldham. Also from Hobbies Branches.

ELECTRIC LAMP PATTERNS (See page 311)



Printed by BALDING & MANSELL, LTD., Wisbech, and Published for the Proprietors, HOBBIES LTD., by HORACE MARSHALL & SON, LTD., Temple House, Tallis Street, E.C.4. Sole Agents for Australia and New Zealand: Gordon & Gotch (A'sia) Ltd. For South Africa; Central News Agency Ltd. Registered for transmission by Canadian Magazine Post.